

Claims 3, 33, and 46

Independent claim 3 explicitly requires periodically performing channel quality measurements “wherein said frequency of performing said channel quality measurements is a function of the relative position of said mobile station with respect to a first base station serving said mobile station and at least one additional base station.” Therefore, a mobile unit must know its position relative to at least two base stations, and vary the frequency of performing the relevant channel quality measurements dependent on the relative ratio of the distances of the mobile station with respect to the at least two different base stations. Applicant directs the Examiner’s attention to page 11, lines 4-9, of Applicant’s specification, which provides an example of one particular embodiment.

The Examiner admits on page 2 of the Office Action that Souissi fails to teach or suggest this limitation of claim 3; Applicant submits that the addition of Menich does nothing to remedy this deficiency for at least two reasons. First, Menich never teaches or suggests varying the frequency of performing channel quality measurements. In fact, there is never any indication whatsoever that Menich varies the frequency with which the RSSI measurement are made, nor does the Examiner suggest that there is. What is clear is that the mobile units of Menich measure the RSSI of proximate base stations when the mobiles are in an inactive state (*see* Menich, col. 4, lines 20-29). What is not clear is the rate at which the measurements are taken. For all we know, measurements may only be performed at regular intervals. There is simply no discussion to the contrary and nothing to lead one skilled in the art to believe that performing measurements can be varied. Thus, Menich does not teach or suggest varying the frequency of performing RSSI measurements.

Second, Menich fails to disclose determining a mobile unit’s distance from at least two different base stations, but instead, “uses timing advance to determine a relative distance of a communication unit to the serving base site” (*see* Menich, Abstract,

lines 4-6) (emphasis added). Further, determining distance in Menich entails comparing the timing advance value against a series of threshold values “representing distance, and direction, from a serving base station” (see Menich, col. 4, lines 62-63) (emphasis added). Thus, Menich at best discloses nothing more than determining a mobile unit’s distance and direction from a single, serving base station, not at least two different base stations as required in claim 3.

Therefore, Menich fails to teach or suggest Applicant’s claim 3 because Menich does not teach or suggest varying the frequency of performing RSSI measurements, and certainly not as a function of relative distance to at least two base stations. Contrary to Applicant’s claim 3, Menich is only operable to determine distance from a single base station. As such, neither Souissi nor Menich alone disclose the claim 3 limitation quoted above, and thus, the combination of Souissi and Menich fails to disclose each limitation of claim 8. Accordingly, the §103 rejection must fail, and Applicant respectfully requests the allowance of claim 3, and its dependent claims 4-5, and 10-14.

With respect to claim 33, it requires the mobile station to include control logic “wherein said control logic varies the frequency of performing said channel quality measurements based on the relative position of said mobile station with respect to a first base station serving said mobile station and at least one additional base station.” Further, claim 46 requires periodically performing a task “wherein said frequency of performing said periodic task is a function of the relative position of said mobile station with respect to a first base station serving said mobile station and at least one additional base station.” For the reasons stated above with respect to claim 3, claims 33 and 46 define patentable subject matter over the cited art. Accordingly, Applicant respectfully requests the allowance of independent claims 33 and 46, as well as their respective dependent claims 34-35, 37 and 47-48.

Claims 8, 36, and 49

Independent claim 8 requires performing channel quality measurements “wherein said frequency of performing said channel quality measurements is a function of the length of time said mobile station remains in said position.” This claim covers an embodiment where, for example, the frequency of performing channel quality measurements decreases in proportion to the length of time a mobile remains stationary. The Examiner admits on page 3 of the Office Action, that Souissi does not teach or suggest this limitation, and combines Menich with Souissi in an attempt, albeit flawed, to obviate claim 8. Menich, however, also fails to teach or suggest this limitation, in spite of the Examiner’s assertion.

In the Office Action, the Examiner cites column 5, lines 10-65 of Menich, to support the theory that Menich discloses making measurements as a function of the length of time. A close reading, however, actually reveals that this passage teaches precluding handoff in situations where a mobile unit may be “relatively” stationary, such as in a high-rise building. Specifically, Applicant directs the Examiner’s attention to column 5 of Menich, lines 60-66, which reads (emphasis added):

In the case of elevated structures within a cell (10-19) a minimum distance threshold may be established. The minimum distance threshold may be a timing advance value equal to a cell radius. Under such an embodiment, handover is deferred until a serving BTS (26) determines that the minimum distance threshold has been exceeded.

In view of the above-cited passage, performing the RSSI measurements in Menich appears to be completely independent of the length of time a mobile station remains stationary. Menich merely teaches deferring handoff in cases where a mobile unit may have obtained a favorable “line-of-sight” path to the serving base station, and further, has not exceeded the transmit range of the serving base station. Deferred handoff has

nothing whatsoever to do with, nor does it even suggest, performing measurements as a function of the length of time that a mobile remains stationary.

Therefore, both Menich and Souissi fail to disclose the above-cited limitation of claim 8, and accordingly, cannot be combined to render claim 8 obvious under §103. As such, Applicant respectfully requests the allowance of claim 8, and its dependent claims 2 and 9.

With respect to claim 36, it explicitly requires control logic that “varies the frequency of performing said channel quality measurements based on the length of time said mobile station remains in said position.” Further, claim 49 requires performing a periodic task “wherein said frequency of performing said periodic task is a function of the length of time said mobile station remains in said position.” For the reasons stated above with respect to claim 8, both claims 36 and 49 define patentable subject matter over the cited art. Accordingly, Applicant respectfully requests the allowance of independent claims 36 and 49, as well as their respective dependent claims 32 and 45.

Claims 15 and 38

Independent claim 15 explicitly requires periodically updating the position of a mobile station “...wherein the frequency of said updating is a function of said position of said mobile station.” While both Souissi and Menich may periodically determine distance to a single base station, neither Souissi nor Menich ever teach or suggest varying the frequency of updating (i.e. changing the time period between successive updates) as a function of the position of the mobile station. Souissi teaches nothing more than a performing frequency updates in a uniform manner (i.e., successive updates at regular intervals), as is clear from column 6, lines 42-45, which reads “processing system 206 then checks 608 whether it is time to make another estimate of

the location. (Measurements preferably are made at a predetermined rate, e.g., every minute.)” (emphasis added).

Menich, in contrast to the requirements of claim 15, never varies anything, let alone the frequency of performing the RSSI measurements, and never discloses altering the frequency as a function of position of the mobile unit. At best, Menich can only determine distance to a serving base station at the limits of the threshold values. This is because Menich compares the timing advance value against the predetermined threshold, which in one embodiment, is equal to the maximum distance that the base station is able to transmit. In this case, the base station can determine merely if a given mobile unit is in or out of range, as the threshold value defines a boundary $1\frac{1}{2}$ times the radius of the serving cell (*see* Menich, col. 5, lines 50-53). In other embodiments, Menich compares against a series of threshold values. However, the position of the mobile from the serving base station may only be determined with any accuracy at the point where the mobile stations cross the threshold boundaries. As stated above, the threshold boundaries represent distance and direction from a serving base station; however, Menich never makes any disclosure of what happens when a mobile is between threshold values. During the time when the mobiles are between thresholds, there may be no way in which to calculate position with any accuracy.

Thus, both Souissi and Menich alone fail to disclose the claim 15 limitation “wherein the frequency of said updating is a function of said position of said mobile station,” and therefore, the combination of Souissi and Menich fails to disclose every limitation of claim 15. Therefore §103 is improper, and claim 15 defines patentable subject matter over the art cited by the Examiner. Accordingly, Applicant respectfully requests the allowance of claim 15, as well as its dependent claims 16-26.

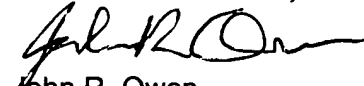
Regarding independent claim 38, it requires control logic for controlling the transceiver and the positioning receiver “...wherein said control logic varies the

frequency of determining said position of said mobile station as a function of said position." For logic similar to that of independent claim 15, both Souissi and Menich fail to teach control logic that varies the frequency of determining the location of a mobile as a function of the mobile position. Therefore, the combination of Souissi and Menich must also fail to obviate claim 38. Accordingly, Applicant respectfully requests the allowance of claim 38, as well as its dependent claims 39-43.

The Examiner also rejects dependent claims 10-11, 24-25 under §103(a) as being unpatentable over Souissi in view of O'Neal. The Examiner relies on O'Neal solely for the purpose of showing that packet-switched calls are known. As such, O'Neal does not remedy the deficiencies of Souissi noted above; nor does the Examiner allege that it does. Accordingly, additional discussion of claims 10-11, 24-25 is believed unnecessary in view of the arguments presented above with respect to their respective independent claims.

Respectfully submitted,
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